

## ABSTRACT OF THE DISCLOSURE

Data is shared across several simultaneous software video encode/compressions sessions with a common input video source. This reduces the amount of work done by each individual encoder by intelligently sharing/reusing data between encoders at various stages of encoding. Each encoder may use the data from another encoder "as-is" or may further minimally process the data. This data sharing reduces the overall encoding time of the streams significantly by reducing the duplicative work that would otherwise have to be performed by each encoder. Data sharing thus enables production of more simultaneous unique compressed video streams per encoding station. To allow sharing and reuse of data between encoders, various modules in the encoding pipeline operate in a hierarchical manner and use each other's output data, and cooperate to produce multiple unique video streams that may differ in format, bit rate, resolution, frame rate, or other video characteristic.

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